

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) An adjustable mirror comprising:  
a first fluid and a second fluid in contact over a meniscus  
extending transverse an optical axis, the fluids being  
substantially immiscible and having different indices of  
refraction;

a reflective surface extending transverse the optical axis;  
and

a meniscus adjuster arranged to controllably alter at least  
one of the shape and the position of the meniscus so that the  
meniscus is asymmetric with respect the optical axis.

2. (Previously Presented) The adjustable mirror as claimed in  
claim 1, wherein said reflective surface is a substantially planar

surface.

3. (Previously Presented) The adjustable mirror as claimed in claim 1, wherein said meniscus adjuster is arranged to utilize the electrowetting effect to alter the shape of the meniscus.

4. (Previously Presented) The adjustable mirror as claimed in claim 1, the mirror further comprising an aspherical lens element extending substantially transverse an optical axis.

5. (Previously Presented) An optical device comprising:  
a first fluid and a second fluid in contact over a meniscus extending transverse an optical axis, the fluids being substantially immiscible and having different indices of refraction;

a reflective surface extending transverse the optical axis;  
and

a meniscus adjuster arranged to controllably alter at least one of the shape and the position of the meniscus so that the meniscus is asymmetric with respect the optical axis.

6. (Previously Presented) The optical device as claimed in claim 5, wherein the device is a lighting system for providing a directed beam of light, the device further comprising a light source arranged to emit electromagnetic radiation.

7. (Previously Presented) The optical device as claimed in claim 5, wherein the optical device comprises a laser cavity, the cavity including a second mirror.

8. (Previously Presented) The optical device as claimed in claim 7, wherein said second mirror is also an adjustable mirror.

9. (Previously Presented) A method of manufacturing an adjustable mirror, the method comprising the acts of:  
providing a first fluid and a second fluid in contact over a meniscus extending substantially transverse an optical axis, the fluids being substantially immiscible and having different indices of refraction;  
providing a reflective surface extending transverse the

optical axis; and

providing a meniscus adjuster arranged to alter at least one of the shape and the position of the meniscus so that the meniscus is asymmetric with respect the optical axis.

10. (Previously Presented) A method of operating an optical device, the optical device comprising:

a first fluid and a second fluid in contact over a meniscus extending transverse an optical axis, the fluids being substantially immiscible and having different indices of refraction; and

a reflective surface extending transverse the optical axis;  
the method comprising controllably altering at least one of the shape and the position of the meniscus so that the meniscus is asymmetric with respect the optical axis.

11. (Currently Amended) The adjustable mirror of claim 1, An  
adjustable mirror comprising:

a first fluid and a second fluid in contact over a meniscus  
extending transverse an optical axis, the fluids being

substantially immiscible and having different indices of refraction;

a reflective surface extending transverse the optical axis;

and

a meniscus adjuster arranged to controllably alter at least one of a shape and a position of the meniscus wherein the meniscus adjuster is arranged to alter the at least one of the shape and the position of the meniscus by changing a first wettability of a first side wall of the adjustable mirror by a different amount than a second wettability of a second side wall of the adjustable mirror.

12. (Previously Presented) The adjustable mirror of claim 1, wherein a first contact angle between the meniscus and a first side wall of the adjustable mirror is different than a second contact angle between the meniscus and a second side wall of the adjustable mirror.

13. (Previously Presented) The adjustable mirror of claim 1, wherein the optical axis extends through a center of the adjustable mirror.

14. (Previously Presented) The adjustable mirror of claim 4, wherein the meniscus adjuster is arranged to alter the at least one of the shape and the position of the meniscus to form an effective mirror having a reflective part and a refractive part.

15. (Previously Presented) The optical device of claim 5, further comprising a reflector located at one of the optical device.

16. (Currently Amended) The optical device of claim 5, An  
optical device comprising:

a first fluid and a second fluid in contact over a meniscus  
extending transverse an optical axis, the fluids being  
substantially immiscible and having different indices of  
refraction;

a reflective surface extending transverse the optical axis;  
and

a meniscus adjuster arranged to controllably alter at least  
one of a shape and a position of the meniscus wherein the meniscus

~~adjuster is arranged to alter the at least one of the shape and the position of the meniscus by changing a first wettability of a first side wall of the adjustable mirror by a different amount than a second wettability of a second side wall of the adjustable mirror.~~

17. (Previously Presented) The optical device of claim 5, wherein a first contact angle between the meniscus and a first side wall of the adjustable mirror is different than a second contact angle between the meniscus and a second side wall of the adjustable mirror.

18. (Currently Amended) ~~The method of claim 9, A method of manufacturing an adjustable mirror, the method comprising the acts of:~~

providing a first fluid and a second fluid in contact over a meniscus extending substantially transverse an optical axis, the fluids being substantially immiscible and having different indices of refraction;

providing a reflective surface extending transverse the optical axis; and

providing a meniscus adjuster arranged to alter at least one of a shape and a position of the meniscus wherein the meniscus adjuster is arranged to alter the at least one of the shape and the position of the meniscus by changing a first wettability of a first side wall of the adjustable mirror by a different amount than a second wettability of a second side wall of the adjustable mirror.

19. (Previously Presented) The method of claim 9, wherein a first contact angle between the meniscus and a first side wall of the adjustable mirror is different than a second contact angle between the meniscus and a second side wall of the adjustable mirror.

20. (Currently Amended) The method of claim 10, A method of operating an optical device, the optical device comprising:  
a first fluid and a second fluid in contact over a meniscus extending transverse an optical axis, the fluids being substantially immiscible and having different indices of refraction; and  
a reflective surface extending transverse the optical axis;

PATENT

Serial No. 10/556,246

Amendment in Reply to Final Office Action of April 23, 2007

the method comprising the act of controllably altering at least one of a shape and a position of the meniscus wherein the meniscus adjuster is arranged to alter the at least one of the shape and the position of the meniscus by changing a first wettability of a first side wall of the adjustable mirror optical device by a different amount than a second wettability of a second side wall of the adjustable mirror optical device.